

of the shape of a nautilus, ready to drop off, and provide for themselves. In the same plate you have a microscopical drawing of one of the English corallines of the same genus, with the embryo specks in each cell.

I must further add, that I believe, if the curious, with good microscopes, at the sea-side, and at different seasons of the year, would strictly examine many of these beautiful sea-productions, hitherto claim'd by the botanists, they would find, that several of the testaceous tribe proceed from some kinds of the larger corals, as well as, I am persuaded, they will find, that many owe their original to the smaller corallines: and we are the more encouraged to try, since we observe, that various shapes and stages of the same animal are no new thing in the laws of nature.

S I R,

Your most obedient humble servant,

John Ellis.

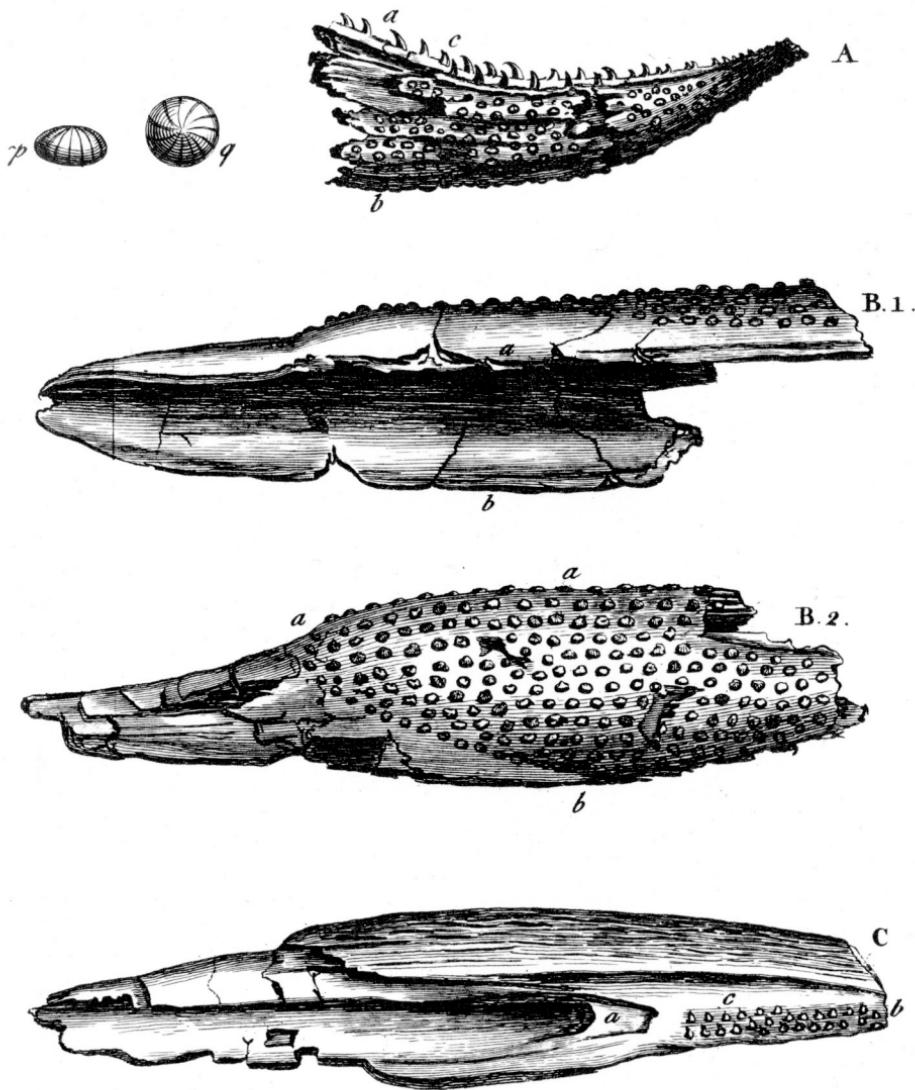
XIX. An Account of some uncommon fossil Bodies, by Mr. Henry Baker, F. R. S.

Read March 29, 1753. **T**HE fossil bodies I have now the honour to lay before this Royal Society, I have never met with before, nor remember any description of. They were sent to me from Oxford, by Mr. William Frankcombe, a young gentleman residing there, who is very diligent in searching

searching after curiosities of this nature. He found them himself, but could not get them out of the bed they lay in without breaking them in many pieces: though he has glued those pieces so well together, that one may judge of them nearly as well as if they had not been broken.

As I must return them to Mr. Frankcombe when they have been examined by you, I have caused Drawings of them to be made, for the satisfaction of those who may never have an opportunity of seeing them; to which Drawings I shall refer in the description of them I am going to give. I shall then inform you, from his letter that accompanied them to me, where and amongst what other kinds of fossil bodies they were found, with other particulars relating to them. And afterwards I shall venture to lay before you a few conjectures concerning them.

Plate VI. shews these curious fossil bodies at more than half their real bigness. They are only three in number, though there are four figures, one of them being drawn in two positions. They are evidently of a boney substance, made black, most likely, and rendered brittle, by some mineral steams or juices, though not corroded by them. Two of these bodies (*A* and *B*) have the greatest part of their outer surface studded, as it were, with pretty regular rows of tubercles, about the size of the heads of small nails, rising to a blunt roundish point, nearly one twelfth of an inch above the surface they issue from. Many of them appear radiated very prettily from the base to the apex; and perhaps they have all been so, tho' in some the lines are not now seen, and may have been



been obliterated by time. These tubercles are of a fine shining glossy black colour, and of a much closer and harder substance than the bone from which they rise.

Figure *A* represents one of these fossil bodies, whose length from end to end is seven inches and a quarter ; on the sides from *a* to *b* its breadth is two inches. The width of that part where the teeth are placed at *c* about seven eighths of an inch ; but it gradually decreases, as does likewise the breadth of the sides, towards the smaller end, which was probably about an inch longer than it now appears, and terminated in a point. The tubercles are largest in the broadest part, and the farther they are from the teeth, near which they are small and flat: they likewise lessen towards the smaller end, which is ridged for about an inch, and without any tubercles.

The under-part of this body is placed uppermost, for the sake of shewing its teeth to the best advantage. There are two rows, running longitudinally, on a little rising in the middle, with no great regularity, and ending in one row of very small ones. The largest are about a quarter of an inch in length, hooked, of a shining black colour, having still the natural polish, and being extremely sharp and perfect. The sides of this fossil have swelled out, and been naturally more rounded than they are at present: for they plainly appear to have been crushed and compressed together by some foreign force.

B 1, is a fossil body, ten inches in length, one part of which is rounded, and the opposite part hollowed: this figure shews the hollow part, which from *a* to *b* is more than one inch and half over ; the chanel

chanel runs its whole length, and where deepest is an inch and half over, but it gradually grows shallower and narrower towards the smaller end. The sides are a quarter of an inch in thickness.

B 2, shews the same fossil body with the rounded part upwards. Its sides from *a* to *b* are two inches. Great numbers of black shining tubercles, of the kind described Fig. *A*, but in general larger, and with less variation in their size as to one another, are disposed in rows, pretty regularly in the manner shewn in the picture. Many of them appear starry or radiated with several fine lines from the base to the apex, which lines rise a little, and in some positions to the light appear of a whitish colour.

Two separate figures of these tubercles are given (*p*, *q*) to make this account the better understood. One is a side and the other a front view. They are hewn magnified about eight times.

C, is a fossil body, much more solid and weighty than the former two. Its length is ten inches. It is rounded on the upper part, where the sides in the broadest place are one inch three quarters : the under part has a hollow or chanel one inch and an eighth in depth, seven inches and a half long, one inch and a half over, its bottom rounded. From *a* three inches and a half to *b* is quite solid, and at *a* in width one inch and a quarter, whence it goes tapering to *b*, where it is broken off so blunt as to shew, that it must probably have extended four or five inches farther. In this solid part *c* stand many small teeth in rows, but not quite regular ; some rows having but two, some three, and others four. They begin an inch distant from the chanel, and went probably to the extremity that is broken

broken off. They are black and shining like those in *A*, but the points somewhat broken ; tho' when whole they must have been less hooked, and much smaller than they.

The rounded part of this fossil body has no tubercles like the other two, tho' it is plainly a species of the same kind with them, but is pretty strongly furrowed, and the ridges have the same black glossy polish as their tubercles.

Mr. Frankcombe writes, " That he met with these " two bodies *A* and *B* in a pit, on the right-hand " side of the road, as you ascend Shotover-hill from " Oxford. The uppermost stratum in this pit con- " fists of a yellow sandy earth ; the next a brownish " clay ; then a regular stratum of large stony nodules, " about twelve inches thick ; then a dark blue clay, " of about ten feet ; and immediately under a rock of " free-stone. About two feet above the free-stone " were found the fossils *A*, *B*. The first was found " at twice ; the second in searching to complete the " first, and both of them in many small pieces, " as is evident from the bodies themselves, which " he carefully joined with some thick gum-water. " That the first is of its proper shape and figure " plainly appears from the regularity of its tubercles : " and the second is as he saw it himself in the stra- " tum. In this clay are found bones of several " kinds, oyster-shells, *Ammonitæ*, crustaceous shells, " *Selenitæ*, and *Belemnitæ*.

" The cliffs on the right-hand side of Pyrton- " Passage over the Severn, Gloucestershire, afforded " the body marked *C*. This, says he, which was " likewife found in a stratum of blue clay, not unlike

“ that at Shotover, and also in several pieces, appeared
 “ different from the others in nothing, but in the want
 “ of tubercles, and I flatter myself will serve to throw
 “ no small light on the subject. His being not quite
 “ so conversant with these cliffs as with the pit at
 “ Shotover, prevents his speaking of them so parti-
 “ cularly as he could wish.”

The general appearance of these fossil bodies gives reason to conjecture, that they are bones belonging to the head or snout of some animal of the fish-kind, or perhaps of some sort of lizard, alligator, or crocodile.

The piece *A*, whose sides are a little crushed, was found in Oxfordshire, together with the piece *B* 1 and *B* 2, and may probably have been part of the same head: and if so, it should seem from the two rows of teeth along its middle to have been the upper part of the head or snout: for some kinds of fishes have teeth in the palate or upper part of the mouth, but we know of none that have teeth along the middle of the lower part: there a tongue most commonly is placed, and the piece *B* has an hollow or chanel well adapted to contain a tongue. The teeth in the palate of the *lupus piscis*, and likewise of some other fishes, are frequently found fossil, of various sizes and shapes, being what are called (very improperly) *Bu-*
fonitæ. When the two pieces *A* and *B* are brought together, their size, figure, and appearance, greatly strengthen the above conjecture: and 'tis worth observing, that the teeth are hooked inward, to prevent the prey when taken from escaping.

The piece *C*, found in Gloucestershire, serves likewise to confirm the same opinion: for the toothing in the middle thereof almost proves that part to have been

been the palate of some animal ; an animal of the same genus too with *A* and *B* ; tho' its having no tubercles, and being more solid, shew it to have been of some different species.

I remember not any fossil bodies like these mentioned by authors, nor can I point out any animal, to which they may with certainty be imputed. Animal substances, before unknown, are met with frequently in the bowels of the earth : for the inhabitants of seas and rivers have been hitherto so imperfectly described, that we know but little of their internal structure ; and many sorts we have never seen or heard of. — Amongst the great numbers of fossil shells we find, how few of their correspondent kinds are seen in the best collections of recent ones ? and what a variety of marine bodies, as well as parts of land-animals, are frequently dug up in this island, of kinds never found recent in our seas, or inhabitants of our clime, such as *nautili*, *ammonitæ*, &c. the teeth and bones of elephants, the palmed horns of the elk, of the morse-deer, and many others ?

I shall be glad to have this subject considered by somebody more able to give you information ; tho' no one wishes more the prosperity of this Royal Society, or can be with greater zeal,

Gentlemen,

Strand, March 29, Your most obedient servant,

1753.

than

Henry Baker.

Q 2

XX.